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EXAMINER	
CENTOLANZI, PATRICK M	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,083	GEHRING ET AL.	
	Examiner	Art Unit	
	PATRICK CENTOLANZI	4165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 April 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/14/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This communication is the first, non-final action on the merits of the instant application filed April 14, 2006. Claims 8 - 16 as preliminarily amended are pending. Claims 1 - 7 are cancelled.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the demodulator (as recited in Claims 8 and 13), the voltage generator (as recited in Claims 8, 9 and 12), the rectifier (as recited in Claims 10 and 14), and the third transformer coil (as recited in Claims 11, 15 and 16) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: The term "control device" is applied to three different items (10, 12, and 15). A "control device" is claimed in Claims 8, 9, 12, and 13. The specification needs to be more specific as to which device is being referenced and described

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not disclose nor describe the demodulator (as recited in Claims 8 and 13), the voltage generator (as recited in Claims 8, 9 and 12), and the rectifier (as recited in Claims 10 and 14).

Claim Objections

4. Claim 9 is objected to because of the following informalities: the phrase "said transformer coil" should be –second transformer coil--. Appropriate correction is required.

5. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims

are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 7 – 15 have been renumbered 8 – 16, respectively.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 11, 15, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not disclose nor describe the "third transformer coil".

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: second transformer coil.

The claimed arrangement is to control components in the trailer. This cannot occur without a second transformer coil.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 8 – 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Ryan (5,204,819).

As Per Claim 8, Ryan teaches a semitrailer train comprising:

a towing vehicle (12);

a semitrailer (14);

a control device for controlling components of the semitrailer being provided in the towing vehicle (vehicle identification module 10 and trailer identification module 18 control parking brake valve 123 via central processing unit 132; Figures 1, 2, and 3);

data lines in the semitrailer for transmitting the control data and power supply lines for supplying power to the components (shown in Figure 3);

a voltage generator for generating a periodically fluctuating carrier signal provided in the towing vehicle (coil driver 82), wherein a signal modulator (72) modulates the control data onto a carrier signal (Column 6, Lines 35 - 51);

a demodulator in the semitrailer (186) separates a total signal which is transmitted by inductive coupling into a carrier signal and includes the control data with the control data

being provided for actuating said components in the semitrailer (trailer identification module 18 controls parking brake valve 123 via central processing unit 132; Figure 3); a fifthwheel of the towing vehicle and a coupling part of the semitrailer form a mechanical connection between the towing vehicle and semitrailer, wherein the coupling part of the towing vehicle is a fifthwheel pickup plate and the coupling part of the semitrailer is a kingpin which fits with said coupling part (inherent components in a fifth wheel hitch); and

a first transformer coil (80) arranged in the fifthwheel pickup plate of the towing vehicle in order to transmit the data modulator carrier signal to a second transformer coil (126) proximal to the kingpin of the semitrailer wherein the first transformer coil in the fifthwheel pickup plate of the towing vehicle is a coil whose linear or curved longitudinal axis is arranged substantially parallel to the plate of the fifthwheel pickup plate (Column 12; Lines 8 - 9).

As per Claim 9, Ryan teaches a semitrailer train comprising:

a towing vehicle (12),

a semitrailer (14);

a control device for controlling components of the semitrailer being provided in the towing vehicle (vehicle identification module 10 and trailer identification module 18 control parking brake valve 123 via central processing unit 132; Figures 1, 2, and 3); data lines in the semitrailer for transmitting the control data and power supply lines for supplying power to the components (shown in Figure 3),

a voltage generator for generating a periodically fluctuating carrier signal provided in the towing vehicle (coil driver 82), wherein the carrier signal is transmitted by inductive coupling as a power supply voltage for said components in the semitrailer (rectifier 908 outputs a voltage to supply components with power; Column 16, Lines 40 - 41);
a fifthwheel of the towing vehicle and a coupling part of the semitrailer form a mechanical connection between the towing vehicle and the semitrailer, wherein the coupling part of the towing vehicle is a fifthwheel pickup plate and the coupling part of the semitrailer is a kingpin which fits with said coupling part (inherent in a fifth wheel hitch), and
a first transformer coil (80) arranged in the fifthwheel pickup plate of the towing vehicle in order to transmit the carrier signal to a said transformer coil (126) proximal to the kingpin of the semitrailer wherein the first transformer coil in the fifthwheel pickup plate of the towing vehicle is a coil whose linear or curved longitudinal axis arranged substantially parallel to the plane of the fifthwheel pickup plate (Column 12; Lines 8 - 9).

As per Claim 10, Ryan teaches a semitrailer train, wherein the semitrailer includes a rectifier (908) which converts the carrier signal into direct current whereby the components of the semitrailer are supplied with direct voltage (rectifier 908 outputs a voltage to supply components with power; Column 16, Lines 40 - 41).

As per Claim 11, Ryan further teaches a semitrailer train, further comprising a third transformer coil (176) proximal to the kingpin of the semitrailer whose linear or curved longitudinal axis is arranged essentially parallel to the plane of the fifthwheel pickup plate when the semitrailer train is coupled (Column 12; Lines 8 - 9).

As per Claim 12, Ryan teaches a towing vehicle arrangement comprising:
a fifthwheel having a fifthwheel pickup plate for forming a mechanical connection between a towing vehicle and a semitrailer (inherent in a fifth wheel hitch);
a control device in the towing vehicle for controlling components of the semitrailer (vehicle identification module 10 and trailer identification module 18 control parking brake valve 123 via central processing unit 132; Figures 1, 2, and 3), data lines for transmitting control data to the semitrailer (shown in Figure 3);
power supply lines for supplying power to the components of the semitrailer (shown in Figure 3);
an alternating voltage generator with towing vehicle for generating a carrier signal (coil driver 82) wherein a signal modulator (72) modulates the control data onto the carrier signal (Column 6, Lines 35 - 51),
a first transformer coil (80) is arranged in the fifthwheel pickup plate of the towing vehicle in order to transmit the modulated carrier signal to a second transformer coil (126) proximal to a kingpin of the semitrailer in order to generate in the semitrailer a carrier signal and control data for said components in the semitrailer from the signal which is transmitted by inductive coupling (trailer identification module 18 controls parking brake valve 123 via central processing unit 132; Figure 3) wherein the first transformer coil in the fifthwheel pickup plate of the towing vehicle is a coil whose linear or curved longitudinal axis is arranged substantially parallel to the plane of the fifthwheel pickup plate (Column 12; Lines 8 - 9).

As per Claim 13, Ryan teaches a semitrailer arrangement for a semitrailer train comprising:

a kingpin for coupling to a coupling part of a towing vehicle (inherent in a fifth wheel hitch);

a control device for the towing vehicle for actuating components of the semitrailer (vehicle identification module 10 and trailer identification module 18 control parking brake valve 123 via central processing unit 132; Figures 1, 2, and 3);

data lines in the semitrailer for transmitting the control data, and power supply lines for supplying power to the components (shown if Figure 3);

a demodulator (rectifier 908, Figure 11) which separates a total signal transmitted from the towing vehicle by inductive coupling into an energy-carrying power supply voltage and the control data which is provided in the semitrailer, the power supply voltage being provided to supply power to said components in the semitrailer (Column 16, Lines 40 - 41); and

a transformer coil (80) proximal to the kingpin of the semitrailer whose linear or curved longitudinal axis is arranged substantially parallel to the plane of the fifthwheel pickup plate when the semitrailer train is coupled (Column 12; Lines 8 - 9).

As per Claim 14, Ryan further teaches a semitrailer train, wherein the semitrailer includes a rectifier (908) which converts the carrier signal into direct current whereby the components of the semitrailer are supplied with direct voltage (rectifier 908 outputs a voltage to supply components with power; Column 16, Lines 40 - 41).

As per Claim 15, Ryan further teaches a semitrailer train, further comprising a third transformer coil (176) proximal to the kingpin of the semitrailer whose linear or curved longitudinal axis is arranged essentially parallel to the plane of the fifthwheel pickup plate when the semitrailer train is coupled (Column 12; Lines 8 - 9).

As per Claim 16, Ryan also teaches a semitrailer train, further comprising a third transformer coil (176) proximal to the kingpin of the semitrailer whose linear or curved longitudinal axis is arranged essentially parallel to the plane of the fifthwheel pickup plate when the semitrailer train is coupled (Column 12; Lines 8 - 9).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patent 5,677,667 discloses a data communications apparatus for tractor/trailer using pneumatic coupler.

US Patent 6,222,443 discloses a quick reliable power and/or data transfer system between tow vehicle and trailer via hitch and hitch receiver coupling.

US Patent 6,481,738 discloses a connecting device imbedded in a trailer hitch.

US Patent 6,786,735 discloses a wireless electrical connection for components mounted on a movable truck bed.

US Patent 5,488,352 discloses a communications and control system for tractor/trailer and associated method.

US Patent 5,999,091 discloses a trailer communications system.

US Patent 6,501,376 discloses a method and apparatus for data exchange between towing vehicle and trailer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICK CENTOLANZI whose telephone number is (571) 270-5791. The examiner can normally be reached on Monday - Thursday, 7:30 AM - 5:00 PM; Selected Fridays, 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley D. Morris can be reached on (571) 272-6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PATRICK CENTOLANZI
Examiner
Art Unit 4165

PMC 10/06/08

/Lynda Jasmin/
Supervisory Patent Examiner, Art Unit 4165